CONSULTING ENGINEERS & GEOLOGISTS, INC.
812 W. Wabash • Eureka, CA 95501-2138 • 707-441-8855 • Fax 707-441-8877 • info@shn-eureka.com

Reference: 001133.207

October 3, 2005

Ms. Kasey Ashley
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Blvd., Suite A
Santa Rosa, CA 95403

Subject: Third Quarter 2005 Groundwater Monitoring Report, Ukiah Hot Plant, Ukiah, California; Case No. 1NMC545

Dear Ms. Ashley:

Here is the Third Quarter 2005 Groundwater Monitoring Report for the Ukiah Hot Plant, 4201 North State Street; Ukiah, Mendocino County, California. This report includes a brief discussion on the background of the site, vicinity information, a description of the work performed, and a summary of the results of the quarterly monitoring event. This work is being performed at the request of the California Regional Water Quality Control Board, North Coast Region (RWQCB).

Introduction

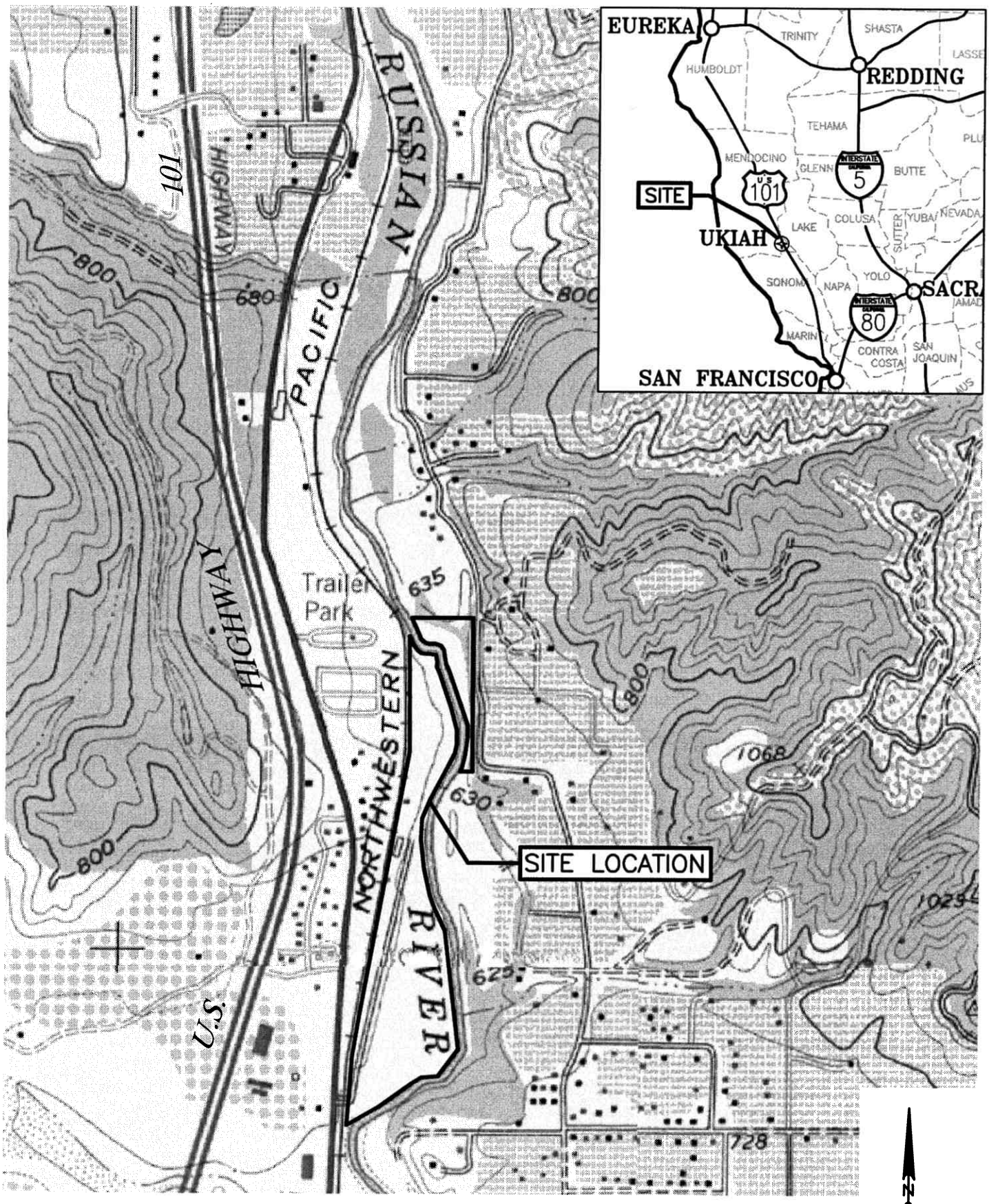
The Ukiah Hot Plant is located approximately 2 miles north of Ukiah, between the Russian River and State Highway 101 (Figure 1). The overall subject property encompasses in excess of 40 acres, of which the 4 southern parcels (APNs 167-260-05, 167-230-15 & 16, 167-190-24) are occupied by the asphalt batch and gravel processing plants, gravel stockpiles, and other support facilities (referred to in general as the "batch plant site"). The remaining 2 parcels (APNs 168-120-01 & 04) consist of approximately 3.8 acres of gravel bar and stream channel, located on the east side of the Russian River near the north end of the batch plant site.

The site is bound to the north, east, and south by the Russian River, and to the west by commercial/residential development located along North State Street. The elevation of the site is approximately 640 feet above Mean Sea Level (MSL).

Background

Granite Construction is the current owner and operator of the facility having purchased the facility from Parnum Paving. Prior to Parnum Paving, several different owners/operators have been at the facility over the past 40 years. The facility consists of sand and gravel aggregate operations, an asphalt drum-mix plant (hot plant), an equipment yard, and a maintenance shop. Facility operations include the stockpiling of gravel and rock material, crushing, washing, and sorting of the sand and aggregate used for general roadway construction, and for the incorporation of processed aggregate into asphalt concrete. The operations also include the fueling, maintenance, and storage of equipment used to transport and utilize the paving materials, as needed.

On July 9 through 11, 2001, SHN Consulting Engineers & Geologists, Inc. (SHN) supervised the installation of 28 soil borings and 50 test pits. Soil borings and test pit locations were selected by



SOURCE:
UKIAH USGS 7.5 MINUTE QUADRANGLE

SHN Consulting Engineers & Geologists, Inc.	Granite Construction Ukiah Hot Plant Ukiah, California	Site Location Map SHN 001133.207	
	January, 2005	001133.207-F1	Figure 1

SHN or Granite Construction and then cleared by NORCAL Geophysical to minimize damage to existing underground utilities. Soil borings were drilled using a truck mounted Geoprobe® rig operated by Fisch Environmental of Valley Springs, California. Borings were extended to a maximum depth of 23 feet Below Ground Surface (BGS). One hand-augered boring was advanced to 6 feet BGS behind the shop. Test pits were excavated using a backhoe or excavator and extended to a maximum depth of 11 feet BGS. Compete results of the investigation are presented in the report entitled *Environmental Site Assessment, Ukiah Hot Plant, Ukiah, California.* (SHN, 2003).

On March 8 and 9, 2004, SHN supervised Weeks Drilling of Sebastopol, California in the installation of three groundwater-monitoring wells in the vicinity of the hot plant (SHN, 2004).

Geology

Geology in the vicinity of the site consists of Quaternary Alluvium underlain by Plio-Pleistocene age alluvial and lacustrine deposits locally known as the Ukiah Beds. The Ukiah Beds are composed of low permeability materials consisting of moderately indurated beds of clayey and sandy gravels with subordinate amounts of clayey sands and sandy clays (NGI, 1987).

In general, sediments in the vicinity of the hot plant consist of varying thicknesses of gravelly fill with minor asphalt debris underlain by interbedded sandy gravels and fine to medium grained sands or silty sands. Depth to bedrock varied from approximately 15 feet to 17 feet BGS. The bedrock consists of moderately indurated olive green siltstone or claystone.

Field Activities

Monitoring Well Sampling

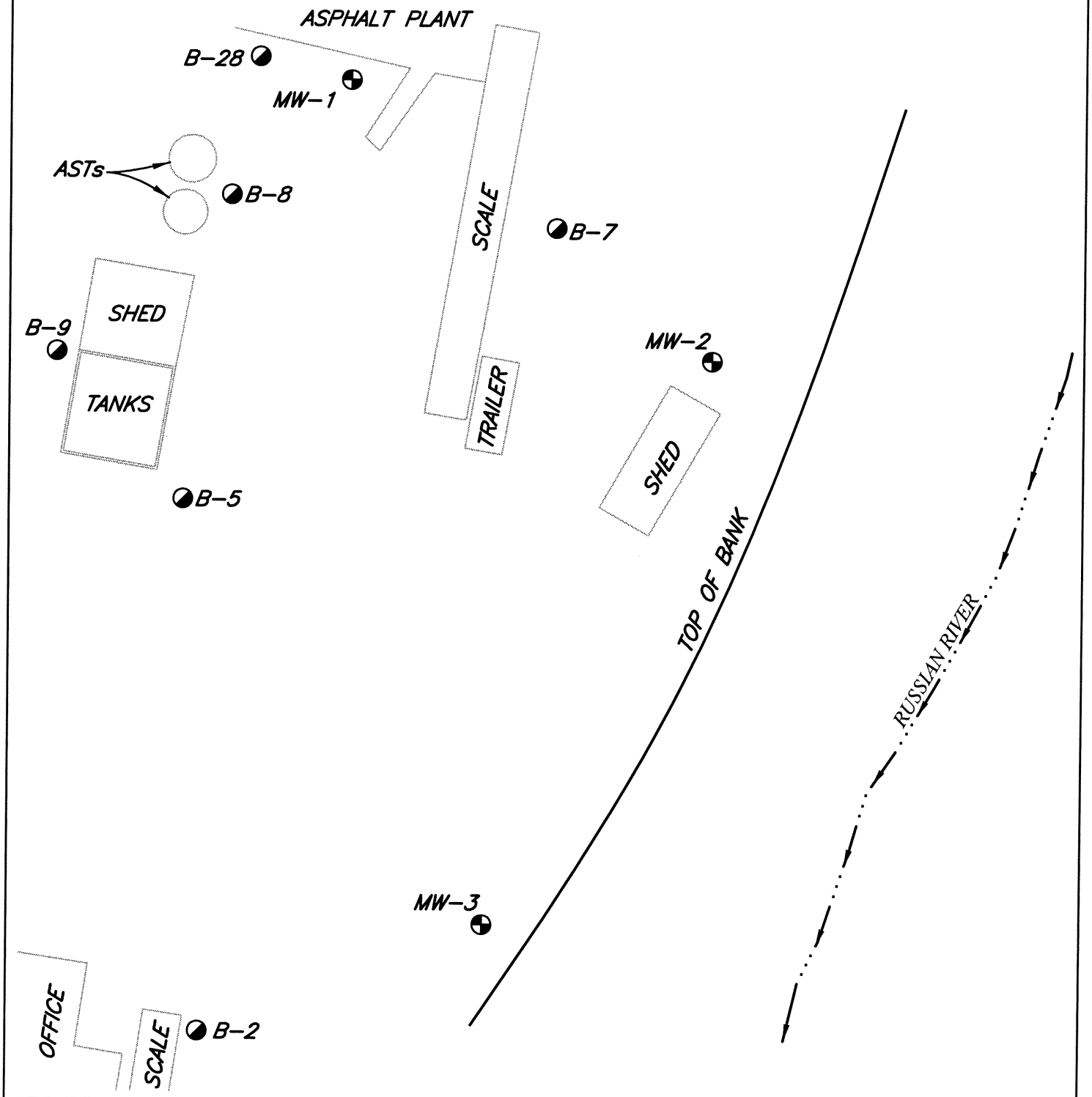
On September 12, 2005, SHN conducted quarterly groundwater monitoring of site monitoring wells (Figure 2). Prior to sample collection, each well was checked for free product (none was observed), and measured for depth to groundwater to the nearest 0.01 foot, utilizing an electronic water sensor. Approximately three casing volumes of water were purged from three monitoring wells using a disposable bailer. Electrical conductivity, pH, and temperature were monitored periodically during purging activities using portable instrumentation. Each groundwater well was also monitored for Dissolved Oxygen (DO), Oxidation-Reduction Potential (ORP), and Dissolved Carbon Dioxide (DCO_2).

Groundwater samples were collected from the three monitoring wells using disposable polyethylene bailers, and transferred into laboratory-supplied bottles. The water samples were then labeled, stored in an iced cooler, and transported to the analytical laboratory under proper chain-of-custody documentation. Groundwater monitoring data sheets are included in Attachment 1.

Laboratory Analysis

Each groundwater sample was analyzed for:

- Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) in general accordance with United States Environmental Protection Agency (EPA) Method No. 8015M.



SHN Consulting Engineers & Geologists, Inc.	Granite Construction Ukiah Hot Plant Ukiah, California	Site Plan SHN 001133.207	
	APRIL 2004	001133.207-SITE-SURVEY	Figure 2

Groundwater samples were submitted to Alpha Analytical Laboratories Inc., of Ukiah, California.

Equipment Decontamination Procedures

All small equipment that required on-site cleaning was cleaned using the triple wash system. The equipment was first washed in a water solution containing Liquinox® cleaner, followed by a distilled water rinse, then by a second distilled water rinse.

Investigation-Derived Waste Management

Water used in the decontamination of equipment, tools, and all purge water was contained in approved DOT 17 E/H, 55-gallon drums. The water was transported to SHN's purge water storage facility and will be discharged, under permit, to the City of Eureka wastewater collection system. Approximately 15 gallons of water were generated during this monitoring event. A discharge receipt will be included in the next quarterly monitoring report. A discharge receipt for water generated during the previous monitoring event is included in Attachment 1.

Groundwater Monitoring Results

Hydrogeology

Depth to groundwater measurements were collected on September 12, 2005. The direction of groundwater flow on September 12, 2005 was to the south-southwest with an approximate gradient of 0.012 (Figure 3). Groundwater elevations are presented in Table 1. Historic groundwater elevation data are included in Attachment 2.

Table 1
Groundwater Elevations, September 12, 2005
Ukiah Hot Plant, Ukiah, California

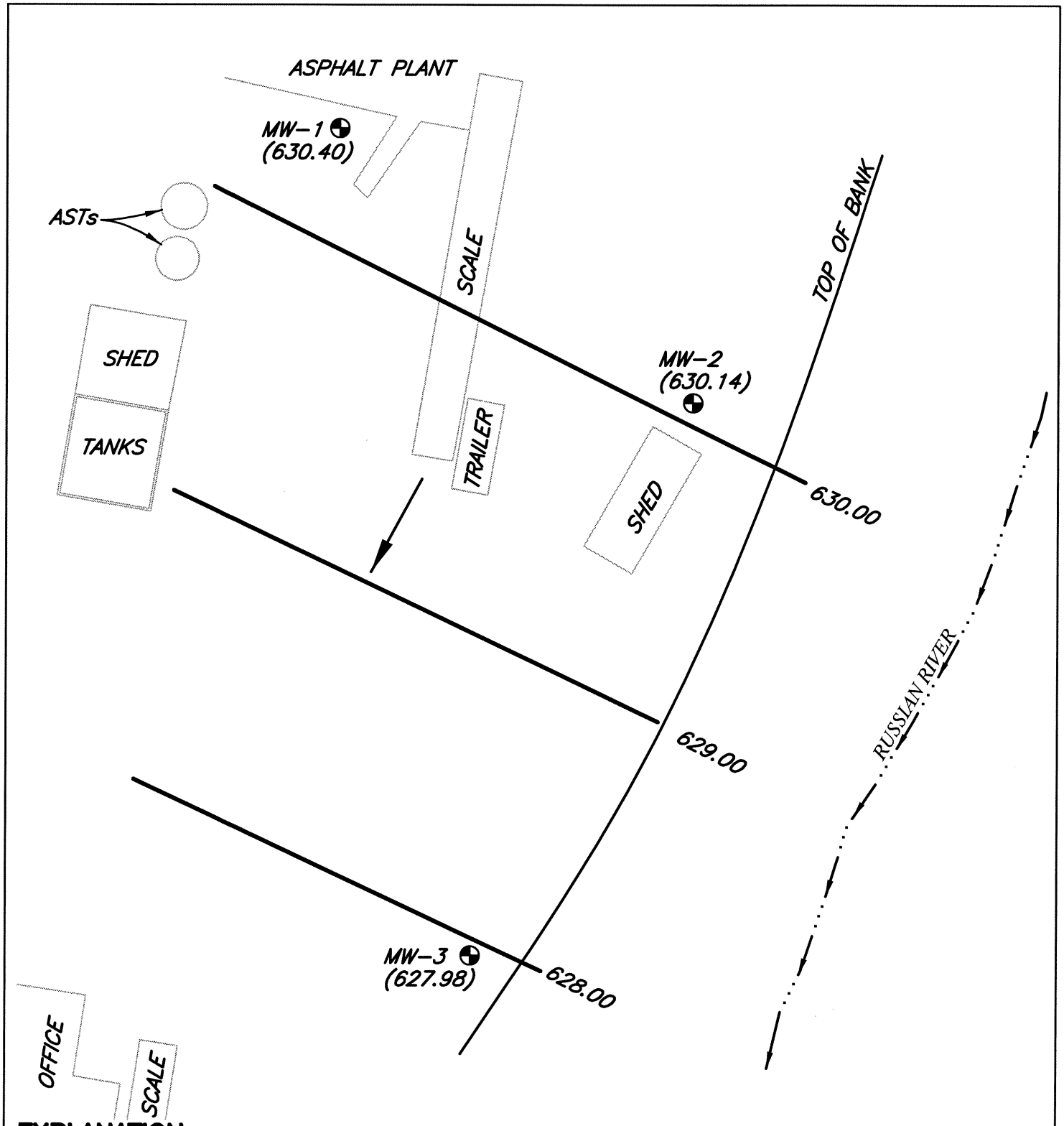
Sample Location	Top of Casing Elevation (feet)[1]	Depth to Water (feet)[2]	Groundwater Elevation (feet)[1]
MW-1	645.05	14.65	630.40
MW-2	642.56	12.42	630.14
MW-3	643.71	15.73	627.98

1. Referenced to NAVD88 2. Below top of casing

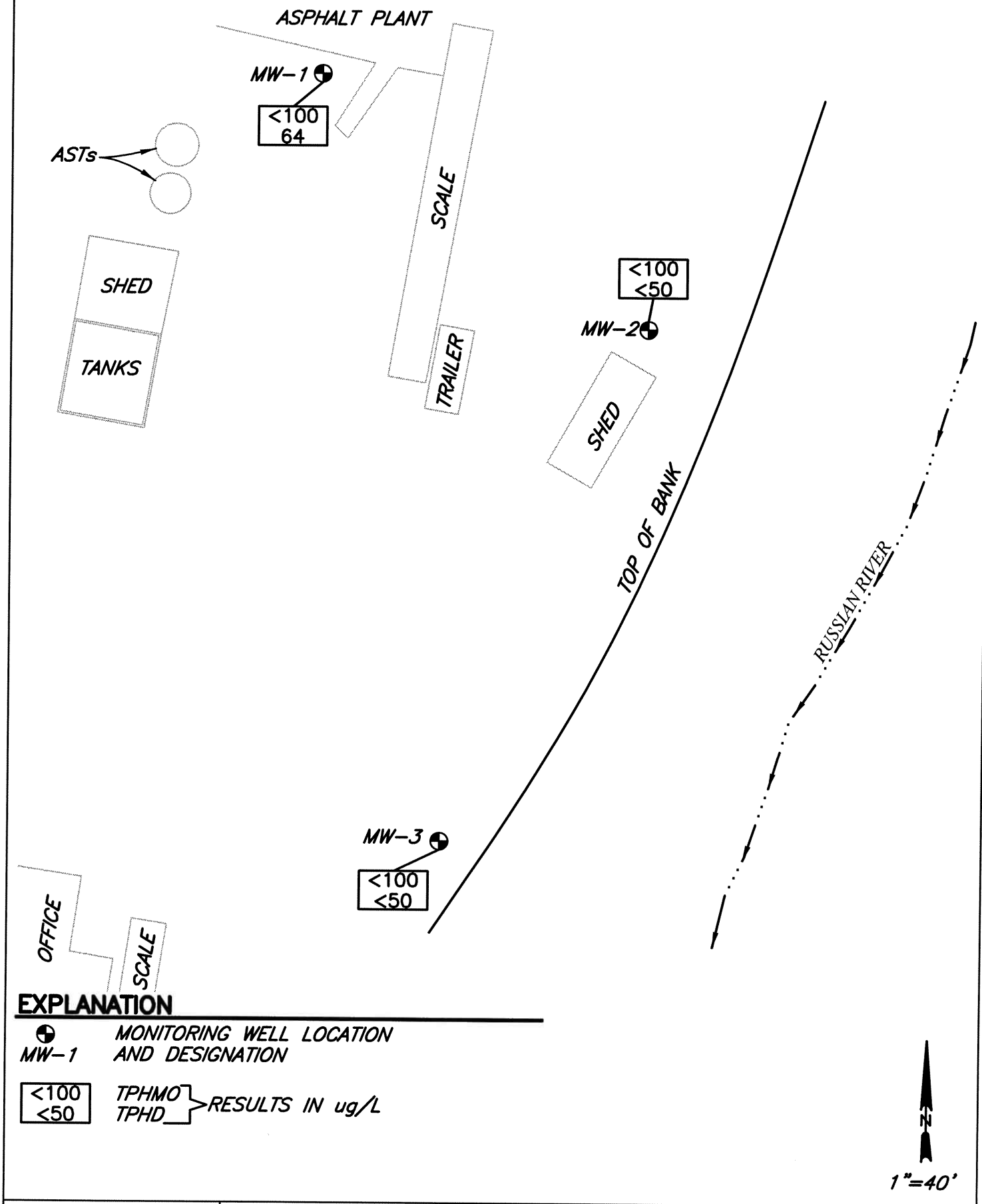
Groundwater Analytical Results

Groundwater was sampled from each well on September 12, 2005. Analytical results are presented in Table 2 and Figure 4.

TPHD was detected in the groundwater sample from MW-1 at a concentration of 64 micrograms per Liter (ug/L). No other analytes were detected in any other groundwater samples above the method detection limits. Historic groundwater analytical data are included in Attachment 2. The laboratory analytical report is presented in Attachment 3.



SHN Consulting Engineers & Geologists, Inc.	Granite Construction Ukiah Hot Plant Ukiah, California	Groundwater Contours September 12, 2005 SHN 001133.207
	September 2005	001133.207-GWC-SEP-05	Figure 3



SHN Consulting Engineers & Geologists, Inc.	Granite Construction Ukiah Hot Plant Ukiah, California	TPHMO and TPHD Concentrations in Groundwater, September 12, 2005 SHN 001133.207	
	September 2005	001133.207-GAR-SEP-05	Figure 4

Table 2
Groundwater Analytical Results, September 12, 2005
Ukiah Hot Plant, Ukiah, California
(in ug/L)[1]

Sample Location	TPHMO[2]	TPHD[2]
MW-1	<100[3]	64
MW-2	<100	<50
MW-3	<100	<50

1. ug/L: micrograms per Liter
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) analyzed in general accordance with EPA Method No. 8015M
3. <: Denotes a value that is "less than" the method detection limit.

Natural Attenuation Parameters

DO, ORP, and DCO_2 were measured in the monitoring wells prior to sampling. Results are presented in Table 3. Historic DO, ORP, and DCO_2 measurement results are included in Attachment 2.

Table 3
DO, DCO_2, and ORP Measurement Results, September 12, 2005
Ukiah Hot Plant, Ukiah, California

Sample Location	DO[1] (ppm)[2]	DCO_2[3] (ppm)	ORP[4] (mV)[5]
MW-1	4	44	45
MW-2	2	66	-2
MW-3	1	60	16

1. DO: Dissolved Oxygen, field measured using a field test kit
2. ppm: Measurement concentration, in parts per million
3. DCO_2: Dissolved Carbon Dioxide, field measured using a field test kit
4. ORP: Oxidation-Reduction Potential, measured using portable instrumentation
5. mV: millivolts

Discussion and Recommendations

- TPHMO and TPHD were not detected in any groundwater sample collected, except for TPHD in MW-1 at a concentration of 64 ug/L.
- Natural attenuation of petroleum hydrocarbons appears to be occurring at the site (SHN, 2005).

SHN recommends one additional groundwater monitoring event to confirm the decreasing trends in contaminant concentrations. Prior to groundwater sampling, wells will be checked for depth to water, and monitored for DO, DCO_2, and ORP. Wells will be purged of approximately three well

casing volumes prior to sampling. During well purging, groundwater will be monitored for temperature, pH, and conductivity. Groundwater samples will be analyzed for TPHMO and TPHD.

SHN will complete and submit the next quarterly monitoring report, no later than 60 days following the quarterly sampling event. The letter report will include a description of the monitoring and sampling activities, a summary of results, analytical reports, groundwater elevations, and groundwater contour maps. An annual summary will also be included with the fourth quarter 2005 monitoring report. The next quarterly groundwater-monitoring event is scheduled for December 2005.

If you have any questions regarding the work completed, please call me at 707/441-8855.

Sincerely,

SHN Consulting Engineers & Geologists, Inc.

John Aveggio, P.E.
Project Manager

JJA/RMR:med:ap
Attachments:
1. Field Notes
2. Historic Monitoring Data
3. Laboratory Analytical Report

copy w/attach: Mr. Geoff Boraston, Granite Construction
Mr. Jordan Main, Granite Construction
Mendocino County Department of Environmental Health

References Cited

NGI. (1987). *Geologic Investigation of the Existing York Ranch Wood Waste Disposal Facility Operated by Louisiana Pacific Corporation near Calpella, Mendocino County, California*. Eureka: NGI.

SHN Consulting Engineers & Geologists, Inc. (2003). *Environmental Site Assessment, Ukiah Hot Plant, Ukiah, California*. Eureka: SHN.

---. (2004). *Monitoring Well Installation and First Quarter 2004 Groundwater Monitoring Report, Ukiah Hot Plant, Ukiah, California; Case No. 1NMC545*. Eureka: SHN.

---. (2005). *Second Quarter 2005 Groundwater Monitoring Report, Ukiah Hot Plant, Ukiah, California; Case No. 1NMC545*. Eureka: SHN.

Attachment 1

Field Notes

CONSULTING ENGINEERS & GEOLOGISTS, INC.
1780 Hemsted Drive * Redding, CA 96002 * Tel: 530.221.5424 * FAX: 530.221.0135 * E-mail: shninfo@shn-redding.com
812 W. Wabash * Eureka, CA 95501 * Tel: 707.441.8855 * FAX: 707.441.8877 * E-mail: shninfo@shn-engr.com

DAILY FIELD REPORT

JOB NO 001133.207
Page 1 of 1

PROJECT NAME: UKIAH HOT PLANT	CLIENT/OWNER: GRANITE CONST.	DAILY FIELD REPORT SEQUENCE NO: 3	
GENERAL LOCATION OF WORK: UKIAH, CA	OWNER/CLIENT REPRESENTATIVE: JORDAN MAIN	DATE: 9/12/05	DAY OF WEEK: MONDAY
TYPE OF WORK: QUARTERLY SAMPLING	WEATHER	PROJECT ENGINEER/ SUPERVISOR: J. AVEGLIO / R. RUEBER	
SOURCE & DESCRIPTION OF FILL MATERIAL	KEY PERSONS CONTACTED: JORDAN MAIN	TECHNICIAN: T. BURLESON	

DESCRIBE EQUIPMENT USED FOR HAULING, SPREADING, WATERING, CONDITIONING, & COMPACTING

0902	ARRIVED ON SITE, CHECKED IN WITH JORDAN MAIN AT OFFICE. (3,1,2)
0915	UNLOCKED AND REMOVED CAPS AND LIDS ON ALL 3 WELLS.
0925	STARTED TAKING WATER LEVELS, DECONING SOUNDER AFTER EACH USE, SCRUBBING WITH LIQUINOX THEN RINSING WITH D.I. WATER, DECON WATER CAUGHT IN WASH TUB.
0947	STARTED TAKING READINGS BEGINNING WITH MW-3, WITH ITS BAILER, CAPTURING PURGE WATER IN GRADUATED 5 GALLON BUCKET AND TRANSFERRING TO 55 GALLON DRUM THAT IS LABELED AND STORED ON SITE.
1040	STARTED TAKING READINGS ON MW-1 WITH ITS BAILER, CAPTURING PURGE WATER IN 5 GALLON BUCKET & TRANSFERRING TO 55 GALLON DRUM ON SITE.
1135	STARTED TAKING READINGS ON MW-2 WITH ITS BAILER, CAPTURING PURGE WATER IN 5 GALLON BUCKET AND TRANSFERRING TO 55 GALLON DRUM STORED ON SITE.
1215	TOOK A DTW READING ON MW-3 THEN SAMPLED MW-3 WITH ITS DISPOSABLE BAILER. DECON SOUNDER, SECURED CAP AND LID.
1230	TOOK A DTW READING ON MW-1 THEN SAMPLED MW-1 WITH NEW 2" BAILER, DECON SOUNDER, SECURED CAP & LID.
1250	TOOK A DTW READING ON MW-2 THEN SAMPLED MW-2 WITH ITS DISPOSABLE BAILER, DECON SOUNDER, SECURED MW-2 CAP & LID.
1305	SECURED 55 GALLON DRUM, APPROX. 15 GALLONS PURGE WATER IN DRUM. SECURED SITE.
1315	CHECKED OUT @ OFFICE
1345	DROPPED OFF SAMPLES AT ALPHA LABS.

COPY GIVEN TO: R. RUEBER

REPORTED BY: T. BURLESON

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Groundwater Elevations

Job No.: 001133.207 Name: TOD E. BURLESON

Client: Granite Construction Date: 9/12/05

Location: Ukiah, California Weather: CLEAR, WARM

Sample Location	Time of Reading	Top of Casing Elevation (feet)	Depth To Water (feet)	Water Surface Elevation (feet)
MW-1	0928	645.05	14.65	630.40
MW-2	0930	642.56	12.72	630.14
MW-3	0920	643.71	15.73	627.98

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Equipment Calibration Sheet

Name: TOD E. BURLESON

Project Name: UKIAH HOT PLANT / GRANITE

Reference No.: 00133.207

Date: 9/12/05

Equipment: ☒ pH & EC ☐ PID ☐ $GTCO_2$ ☐ GTLEL
☐ Turbidity ☐ Other

Description of Calibration Procedure and Results:

PH AND EC METER CALIBRATED USING A 2 BUFFER METHOD WITH A PH 7.01 AND 4.01, METER SET AT EXACTLY 7.01 AND 4.01 AND CONDUCTIVITY SET AT 1413 MICROSIEMENS.

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Water Sampling Data Sheet

Project Name:	UKIAH HOT PLANT	Date/Time:	9/12/05
Project No.:	001133.207	Sampler Name:	TOD E. BURLESON
Location:	UKIAH, CA.	Sample Type:	GROUND WATER
Well #:	MW-1	Weather	CLEAR, WARM
Hydrocarbon Thickness/Depth (feet):		Key Needed:	DOLPHIN

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
19.37	-	14.65	=	4.72	x	.653 = 3.10 x3	=	9.30

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1040							0	
1045	4	44	045				1.50	
1100	✓			341	66.2	6.91	3.00	
1114	✓			315	67.6	6.89	6.00	
	NO FLOW			313	68.1	6.88	9.00	VERY CLOSE TO
	THRU CELL							BEING DRY.
1230			SAMPLE	TIME			.25	

Purge Method: HAND BAIL

Total Volume Removed: 9.25 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-1	1 LITER	NONE	ALPHA	TPHd/MO

Well Condition: GOOD

Remarks: RECHARGED TO @ 14.68 @ 1230

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Water Sampling Data Sheet

Project Name:	UKIAH HOT PLANT	Date/Time:	9/12/05
Project No.:	001133.207	Sampler Name:	TOD E. BURLESON
Location:	UKIAH, CA	Sample Type:	GROUND WATER
Well #:	MW-2	Weather	CLEAR, WARM
Hydrocarbon Thickness/Depth (feet):		Key Needed:	DOLPHIN

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
18.74	-	12.42	=	6.32	x	.163	=	1.03 x 3 = 3.1

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
1135							Ø	
1140	2	660	-002				.25	
1150	✓			335	69.6	6.71	1.00	
1155				338	68.9	6.74	2.00	
1202	NO FLOW			323	68.3	6.75	2.85	WENT DRY
	THEN CELL							
1250			SAMPLE	TIME			.25	

Purge Method: HAND BAIL

Total Volume Removed: 3.10 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-2	1 LITER	NONE	ALPHA	TPHd / MO

Well Condition: GOOD

Remarks: RECHARGED TO 12.43 @ 1250

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Water Sampling Data Sheet

Project Name:	UKIAH HOT PLANT	Date/Time:	9/12/05
Project No.:	001133.207	Sampler Name:	TOD E. BURLESON
Location:	UKIAH, CA	Sample Type:	GROUND WATER
Well #:	MW-3	Weather	CLEAR, WARM
Hydrocarbon Thickness/Depth (feet):		Key Needed:	DOLPHIN

Total Well Depth (feet)	-	Initial Depth to Water (feet)	=	Height of Water Column (feet)	x	0.163 gal/ft (2-inch well) / 0.653 gal/ft (4-inch well)	=	1 Casing Volume (gal)
20.32	-	15.73	=	4.59	x	.163	=	.75 x3 = 2.25

Time	DO (ppm)	CO_2 (ppm)	ORP (mV)	EC (uS/cm)	Temp (°F)	pH	Water Removed (gal)	Comments
0955							Ø	
0958	1 mg/L	60	016				.25	
1015	✓			356	63.6	6.68	.75	
1020	✓			361	63.3	6.67	1.50	
1025	NO FLOW			347	65.0	6.73	2.25	
	THRU CELL							
1215			SAMPLE	TIME			.25	

Purge Method: HAND BAIL

Total Volume Removed: 2.50 (gal)

Laboratory Information

Sample ID	# & Type of Containers	Preservative / Type	Laboratory	Analyses
MW-3	1 LITER	NONE	ALPHA	TPHd / MO

Well Condition: GOOD

Remarks: RECHARGED TO 15.74 @ 1215

Client Name: **GRANITE CONSTRUCTION UKIAH HOT PLANT**

The water from your site: **4201 NORTH STATE STREET UKIAH, CA RWQCB CASE # 1NMC545**

SHN ref # **001133.207** Collected On: **6/13/05**

Has been tested and certified as acceptable to be discharged into the City of Eureka municipal sewer system.

Amount Discharged: **18 GALLONS**

Date Discharged: **7/21/05**

Certified by: **DAVID R. PAINE**

SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.

City of Eureka Wastewater Discharge Permit #65

Attachment 2

Historic Monitoring Data

Table 2-1
Historic Groundwater Elevations
Ukiah Hot Plant, Ukiah, California

Location	Date	Top of Casing Elevation (feet)[1]	Depth to Water[2] (feet)	Groundwater Elevation (feet)[1]
MW-1	03/22/04	645.05	13.28	631.77
	06/21/04		14.85	630.20
	09/08/04		14.69	630.36
	12/21/04		13.79	631.26
	03/25/05		11.65	633.40
	06/13/05		13.92	631.13
	09/12/05		14.65	630.40
MW-2	03/22/04	642.56	11.77	630.79
	06/21/04		12.77	629.79
	09/08/04		12.44	630.12
	12/21/04		11.53	631.03
	03/25/05		10.45	632.11
	06/13/05		11.72	630.84
	09/12/05		12.42	630.14
MW-3	03/22/04	643.71	13.71	630.00
	06/21/04		15.81	627.90
	09/08/04		15.75	627.96
	12/21/04		14.08	629.63
	03/25/05		12.68	631.03
	06/13/05		14.62	629.09
	09/12/05		15.73	627.98

1. Referenced to NAVD88
2. Below top of casing

Table 2-2
Historic Groundwater Analytical Results
Ukiah Hot Plant, Ukiah, California
(in ug/L)[1]

Sample Location	Date	TPHMO[2]	TPHD[2]
MW-1	03/23/04	<100[3]	**110**
	06/21/04	<100	<50
	09/08/04	<100	<50
	12/21/04	<100	<50
	03/25/05	<100	**85**
	06/13/05	<100	<50
	09/12/05	<100	**64**
MW-2	03/22/04	**730**	**2,000**
	06/21/04	**1,500**	**3,000**
	09/08/04	**210**	**470**
	12/21/04	<100	**80**
	03/25/05	**170**	**480**
	06/13/05	<100	<50
	09/12/05	<100	<50
MW-3	03/22/04	**110**	<50
	06/21/04	<100	<50
	09/08/04	<100	<50
	12/21/04	<100	<50
	03/25/05	<100	**53**
	06/13/05	<100	<50
	09/12/05	<100	<50

1. ug/L: micrograms per Liter
2. Total Petroleum Hydrocarbons as Motor Oil (TPHMO) and as Diesel (TPHD) analyzed in general accordance with EPA Method No. 8015M
3. <: Denotes a laboratory value that is "less than" the method detection limit.

Table 2-3
Historic DO, DCO_2, and ORP Measurement Results
Ukiah Hot Plant, Ukiah, California

Sample Location	Date	DO[1] (ppm)[2]	DCO_2[3] (ppm)	ORP[4] (mV)[5]
MW-1	03/23/04	0.58	20	243
	06/21/04	0.82	40	139
	09/08/04	0.66	40	51
	12/21/04	2.02	40	63
	03/25/05	0.20	46	68
	06/13/05	2.00	52	42
	09/12/05	4.00	44	45
MW-2	03/22/04	0.58	40	248
	06/21/04	0.64	40	80
	09/08/04	0.61	60	-16
	12/21/04	0.90	40	22
	03/25/05	0.12	56	18
	06/13/05	2.00	52	46
	09/12/05	2.00	66	-2
MW-3	03/22/04	0.60	20	236
	06/21/04	0.64	60	153
	09/08/04	0.71	70	114
	12/21/04	1.03	40	89
	03/25/05	0.12	42	76
	06/13/05	2.00	54	45
	09/12/05	1.00	60	16

1. DO: Dissolved Oxygen, field measured using portable instrumentationor a field test kit
2. ppm: Measurement concentration, in parts per million
3. DCO_2: Dissolved Carbon Dioxide, field measured using a field test kit
4. ORP: Oxidation-Reduction Potential measured using portable instrumentation
5. mV: millivolts

Attachment 3

Laboratory Analytical Reports

Alpha Analytical Laboratories Inc.
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267
208 Mason St. Ukiah, California 95482

23 September 2005

SHN Engineering
Attn: Roland Rueber
812 W. Wabash Ave
Eureka, CA 95501-2138
RE: Granite - Ukiah
Work Order: A509284

Enclosed are the results of analyses for samples received by the laboratory on 09/12/05 13:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc.
208 Mason St. Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

SHN Engineering
812 W. Wabash Ave
Eureka, CA 95501-2138
Attn: Roland Rueber

Report Date: 09/23/05 14:00
Project No: 001133.207
Project ID: Granite - Ukiah

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A509284	09/12/2005 13:45	SHNEUR	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	A509284-01	Water	09/12/05 12:30	09/12/05 13:45
MW-2	A509284-02	Water	09/12/05 12:50	09/12/05 13:45
MW-3	A509284-03	Water	09/12/05 12:15	09/12/05 13:45

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

9/23/2005

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Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
MW-1 (A509284-01)			**Sample Type: Water**			**Sampled: 09/12/05 12:30**			
TPH by EPA/LUFT GC/GCMS Methods									
TPH as Diesel	8015DRO	AI52215	09/22/05	09/22/05	1	**64 ug/l**		50	
TPH as Motor Oil	"	"	"	"	"	ND "		100	
Surrogate: Tetratetracontane	"	"	"	"		*94.4 %*	*20-152*		
MW-2 (A509284-02)			**Sample Type: Water**			**Sampled: 09/12/05 12:50**			
TPH by EPA/LUFT GC/GCMS Methods									
TPH as Diesel	8015DRO	AI52215	09/22/05	09/22/05	1	ND ug/l		50	
TPH as Motor Oil	"	"	"	"	"	ND "		100	
Surrogate: Tetratetracontane	"	"	"	"		*107 %*	*20-152*		
MW-3 (A509284-03)			**Sample Type: Water**			**Sampled: 09/12/05 12:15**			
TPH by EPA/LUFT GC/GCMS Methods									
TPH as Diesel	8015DRO	AI52215	09/22/05	09/23/05	1	ND ug/l		50	
TPH as Motor Oil	"	"	"	"	"	ND "		100	
Surrogate: Tetratetracontane	"	"	"	"		*110 %*	*20-152*		

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9/23/2005

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TPH by EPA/LUFT GC/GCMS Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AI52215 - EPA 3510B Water										
Blank (AI52215-BLK1)				Prepared & Analyzed: 09/22/05						
TPH as Diesel	ND	50	ug/l							
TPH as Motor Oil	ND	100	"							
Surrogate: Tetratetracontane	*94.6*		"	*125*		*75.7*	*20-152*			
LCS (AI52215-BS1)				Prepared & Analyzed: 09/22/05						
TPH as Diesel	1640	50	ug/l	2000		82.0	52-136			
TPH as Motor Oil	1790	100	"	2000		89.5	58-138			
Surrogate: Tetratetracontane	*148*		"	*125*		*118*	*20-152*			
Matrix Spike (AI52215-MS1)		Source: A509284-01		Prepared & Analyzed: 09/22/05						
TPH as Diesel	1810	50	ug/l	2000	64	87.3	61-129			
TPH as Motor Oil	1910	100	"	2000	ND	92.2	47-147			
Surrogate: Tetratetracontane	*110*		"	*125*		*88.0*	*20-152*			
Matrix Spike Dup (AI52215-MSD1)		Source: A509284-01		Prepared & Analyzed: 09/22/05						
TPH as Diesel	1680	50	ug/l	2000	64	80.8	61-129	7.45	25	
TPH as Motor Oil	1760	100	"	2000	ND	84.7	47-147	8.17	25	
Surrogate: Tetratetracontane	*116*		"	*125*		*92.8*	*20-152*			

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9/23/2005

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Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

WORK ORDER
CHAIN OF CUSTODY RECORD

Alpha Analytical Laboratories Inc. • 208 Mason Street, Ukiah, CA 95482 • (707) 468-0401 • FAX (707) 468-5267

DATE 9/12/05 PAGE 1 OF 1

CLIENT'S NAME: SHN	PROJECT MANAGER: JOHN AVEGGIO
STREET ADDRESS: 812 W. WABASH CITY: EUREKA STATE: CA ZIP: 95501	PHONE NUMBER: (707) 441-8855
PROJECT NAME: GRANITE CONST., UKIAH HOT PLANT	FAX NUMBER: (707) 441-8877
CONTRACT/PURCHASE ORDER/QUOTE NUMBER:	SITE CONTACT: JORDAN MAIN
SIGNATURE OF PERSON AUTHORIZING WORK UNDER TERMS STATED ON REVERSE SIDE OF THIS FORM.	SAMPLED BY: TOD E. BURLESON

ANALYSES: TPHd / MO

SAMPLE CONDITION ON RECEIPT: 9.2

COLD/ICED? Yes

BUBBLES OR AIR SPACE? N/A

WERE SAMPLES PRESERVED?

SAMPLE NUMBER/IDENTIFICATION	DATE	TIME	LAB SAMPLE NUMBER	SAMPLE TYPE: AQ	SOIL	COMP	GRAB	NO. OF CONTS	TPHd / MO	EXPLAIN IRREGULARITIES BELOW
MW-1	9/12	1230	A509284-1	X				1	✓	
MW-2	9/12	1250	2	X				1	✓	
MW-3	9/12	1215	3	X				1	✓	

RELINQUISHED BY: (SIGNATURE) Tod T. Burl	RECEIVED BY: (SIGNATURE) Don Specks 9/	DATE 12/05	TIME 13:45
RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	DATE	TIME
RELINQUISHED BY: (SIGNATURE)	RECEIVED FOR LABORATORY BY:		
METHOD OF SHIPMENT	AUTHORIZED BY:		

TURN AROUND TIME REQUESTED

SAMPLE CONTROL OFFICER

SPECIAL INSTRUCTIONS

DRIVING TIME | SITE TIME | TOTAL TIME

SAMPLE DESPOSITION:
1. STORAGE TIME REQUESTED _____ DAYS (SAMPLES WILL BE STORED FOR 30 DAYS WITHOUT ADDITIONAL CHARGES. THEREAFTER STORAGE CHARGES WILL BE BILLED AT THE PUBLISHED RATES.)
2. SAMPLE TO BE RETURNED TO CLIENT? ☐ YES ☐ NO

HAZARDOUS MATERIALS ARE THE PROPERTY OF THE CLIENT. THE CLIENT IS RESPONSIBLE FOR PROPER DISPOSAL OF HAZARDOUS WASTES. CLIENTS NOT PICKING UP HAZARDOUS WASTES MAY BE ASSESSED AN APPROPRIATE FEE.